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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,642	09/19/2003	Shunpei Yamazaki	0553-0378	5083

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COOK, ALEX, MCFARRON, MANZO,
CUMMINGS & MEHLER, LTD.
Suite 2850
200 West Adams St.
Chicago, IL 60606

EXAMINER

MOORE, KARLA A

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/664,642

Applicant(s)

YAMAZAKI ET AL.

Examiner

Karla Moore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 19-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 and 19-24 is/are allowed.
- 6) ☒ Claim(s) 7-10 and 25-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0903,0304,1104</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-10 and 19-28, and cancellation of non-elected claims 11-19, in the reply filed on 8 November 2004 is acknowledged.
2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Information Disclosure Statement

3. The information disclosure statement filed 12 March 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein, that has not been initialed, has not been considered.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

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Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 7-10 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,696,096 to Tsukabi et al. in view of U.S. Patent Publication No. 2003/0015140 A1 to Van Slyke et al., U.S. Patent No. 6,294,892 to Utsugi et al. and U.S. Patent No. 4,897,290 to Terasaka et al.

7. Examiner notes that, in the rejections below, the claim limitations—"alignment means", "means for moving said evaporation source holder" and "means for heating have been interpreted as invoking 35 U.S.C. 112, sixth paragraph. 35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language "shall be construed to cover the corresponding structure...described in the specification and equivalents thereof". The corresponding structure in the specification for "alignment means" has been construed as a CCD camera and a stopper as described in the specification at page 7, line 24. The corresponding structure for "means for moving said evaporation source holder" has been construed as a mechanism in which the evaporation source holder can move in a X-direction or a Y-direction with keeping a horizontal position in the film formation chamber as described in the specification at page 5, beginning at line 4. The corresponding structure for "means for heating" has been construed as a heater as described in the specification at page 6, row 27 and page 21, rows 10-11.

8. Tsubaki et al. discloses the invention substantially as claimed and comprising: a fabrication system comprising: a film formation chamber (Figure 8, 1); an installation chamber (11) connected with the film formation chamber; an evaporation source holder (24); and means for moving the evaporation source holder (60 and 61); wherein said film formation chamber is connected with a vacuum exhaust treatment chamber (20) for allowing the inside of the film formation chamber to be in a vacuum state; wherein said evaporation source holder has containers (grooves in 24 containing evaporation material), said containers being arranged in a longitudinal direction of said evaporation source holder, in each container an evaporation material is contained, and means for heating said containers (Figure 12, 65-67; column 15, rows 57-64).

9. However, Tsubaki et al. fail to teach the system comprising a load chamber, a transport chamber and a plurality of film formation chambers.

10. Van Slyke et al. disclose a cluster tool comprising a load chamber (Figure 2, 110), a transport chamber (102) and a plurality of film formation chambers (130, 140, 150 and 160) for manufacturing light-emitting devices for the purpose of manufacturing a relatively large number of devices using automated or robotic means for transporting or transferring substrates or structures among a plurality of stations (paragraphs 57 and 58).

11. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a cluster tool comprising load chamber, a transport chamber and a plurality of film formation chambers for manufacturing light-emitting devices in Tsubaki et al. in order to manufacture a relatively large number of devices using automated or robotic means for transporting or transferring substrates or structures among a plurality of stations as taught by Van Slyke et al.

12. Tsubaki et al. and Van Slyke et al. disclose the invention substantially as claimed and as described above.

13. However, Tsubaki et al. and Van Slyke et al. fail to teach said film formation chamber comprising alignment means for allowing positions of a mask and a substrate to be in registry with each other.

14. Utsugi et al. teach the use of alignment means for allowing positions of a mask and a substrate to be in registry with each other for the purpose of developing a manufacturing method having sufficient accuracy in order to finely separate a luminescent layer formed by excessively thin organic vaporized film into a sub-pixel of high accuracy of several tens μm (column 2, rows 22-27 and column 5, rows 30-34). The alignment means comprises a stopper/magnet (for stopping misalignment)(column 3, rows 36-41 and column 6, rows 3-6), and a CCD camera for monitoring alignment (column 5, row 34).

15. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided alignment means in Tsubaki et al. in order to allow for positioning of a mask and a substrate to be in registry with each other and in order to develop a manufacturing method having

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sufficient accuracy in order to finely separate a luminescent layer formed by excessively thin organic vaporized film into a sub-pixel of high accuracy of several tens μm as taught by Utsugi et al.

16. Tsubaki et al, Van Slyke et al. and Utsugi et al. disclose the invention substantially as claimed and as described above.

17. However, Tsubaki et al, Van Slyke et al. and Utsugi et al. fail to teach a side of the substrate is set obliquely to a direction in which said evaporation source holder is moved relative to a substrate.

18. Terasaka et al. teach setting a longitudinal direction of a an evaporation source at an oblique angle to a side of a substrate in an x-direction or a y-direction of a substrate (ϕ , phi, Figures 11 and 16a; abstract and column 3, rows 43-49) for the purpose forming a layer having uniform alignment angles at high precision in the direction in which the uniform evaporation depositing on the substrate surface will be required.

19. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a side of a substrate set at an oblique angle with an evaporation source in Tsubaki et al, Van Slyke et al. and Utsugi et al. in order to form a layer having uniform alignment angles at high precision in the direction in which the uniform evaporation depositing on the substrate surface will be required as taught by Teraska et al.

20. With respect to claims 8, 10, 26 and 28 the evaporation source holder (see Figure 10 of Tsubaki et al.) is rectangular.

Allowable Subject Matter

21. Claims 1-6 and 19-24 are allowed.

22. The following is an examiner's statement of reasons for allowance: The prior art of record fails to teach or fairly suggest the installation chamber of the fabrication system described above further comprising means for heating said containers *previously*. Nor was any other piece of properly combinable art located that taught this feature and provided the requisite motivation.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 571.272.1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karla Moore
Art Unit 1763
4 February 2005